

THE LISTENING CENTER

Centennial History

Table of Contents

- I. History
- II. The Past Year, 1967-68
- III. Plans for the Future
 - A. Foreign Language Building
 - B. West Campus
 - C. Video Expansion
 - D. CAI Research
- IV. Highlights
- Appendix A - Traffic Count of Calls Received 1967-68
- Appendix B - Courses using the Listening Center 1967-68
- Appendix C - Number of Students Enrolled in Courses Using the Listening Center
- Appendix D - Sources of Information

I. History

1958-60 The Romance Language and Speech Departments are experimenting with the use of recording devices for listening and speaking practice. The need for an audio laboratory becomes evident.

1960-61 The College of Arts and Sciences installs a library-type lab in Denney Hall for use by all departments; it has 150 booths and 11 program channels. Consultants, among them Professor Skinner of Harvard, are brought in for advice on its use; they advise hiring a fulltime director. Professor Paul Pimsleur, then at UCLA, is engaged.

1961-62 The language departments began, slowly at first, to incorporate listening assignments into their syllabi. The Music Department, though not in the College of Arts and Sciences, expresses interest in using the Listening Center and is encouraged to do so. Attendance averages around 200 per week.

1962-63 Attendance rises sharply as the language and music departments give frequent listening assignments; the average weekly attendance over this year is about 2,000. The number of program channels increases from 11 to 20.

1963-64 Attendance again increases sharply, now averaging 6,000 per week. New languages are taught (Chinese, Japanese); new users request service (English, Education, Linguistics); old users extend their use (German, Romance Languages, Slavic, Music, Speech). Present facilities are clearly inadequate: students queue up for a booth at peak hours, and program channels are strictly rationed. Specifications are written for a decentralized dial-access system unlike any then existing.

1964-65 Overcrowding continues as attendance increases to 8,000 per week on the average. The 20 program channels are more than ever inadequate. Meanwhile, the North Electric Company of Galion, Ohio, the successful bidder, is working with the Listening Center staff to design and produce a dial-access system. They are to have it in operation by September, 1965.

1965-66 The dial-access system, with 267 booths located in 7 campus areas (Ohio Union, Library, Hughes Hall, dorms) is ready for Autumn Quarter use. Student acceptance is immediate; an average of 40,000 calls per week are received in the Autumn Quarter, representing a fourfold increase in use. Departments quickly take advantage of the 60 program channels now available; by the end of the year they are filled, and further expansion is necessary. The new Listening Center, unique in the country, receives many visitors.

1966-67 Expansion brings the total number of Listening Center terminals to 386, and makes 34 more program channels available, for a total of 94. Service is extended off-campus; booths are installed on a rental basis in 24 fraternity, sorority and scholarship houses. Traffic continues at an average rate of 35,000 to 40,000 calls per week. A testing console is installed in Denney Hall to permit group aural and oral testing.

II. The Past Year, 1967-68

Eighteen video positions are installed in Denney Hall. Biological Sciences and Chemical Engineering experiment with video tape homework assignments and decide to incorporate them more fully in future teaching methods.

Use of audio facilities continues high, at about 40,000 calls per week. Total calls for the year: about 1,100,000. (see Appendix A)

Departments continue to diversify their use: new languages (Hebrew, Arabic) are taught, the English and Language departments add many new tapes, Agronomy and Military Science place lectures in the Listening Center. (see Appendix B) Of our 94 program sources, 92 are in use; the necessity of rationing channels again threatens.

Twenty-three different subjects now use the Listening Center; they have an enrollment (Winter 1968) of 15,000 students, or almost 41% of the total University enrollment. (see Appendix C)

During the year, approximately 1,000 master 7" tapes are recorded by the Listening Center for various departments.

The hearing acuity of all entering students is tested, as every year, at special booths in the Listening Center. This year, 8,965 students receive hearing tests.

Early in 1967, a student duplicator is built by the Listening Center to enable students who own a tape recorder to duplicate tapes for studying at home.

Copies of tapes used in courses on the main campus are provided for the Lima, Marion, Newark, and Mansfield campuses through the University College on the main campus.

Construction begins on the Foreign Language Building, which is to house sizeable Listening Center facilities. Planning is underway for expansion to the West Campus.

III. Plans for the Future

A. Foreign Language Building

The installation in the new Foreign Language Building will become the Listening Center's largest branch, which is only natural since foreign languages account for about 2/3 of our use. Although this distribution may change in the future as new departments begin to use our video facilities, our service to the language departments will always be among our most important functions. There will be a room similar to the one in Denney Hall where students can check tapes out of the tape library and play them at any of 60 booths. There will be a recording studio where instructors will get help in preparing high-quality tapes. The most important new feature will be classroom-sized laboratories where classes can be brought in to work under the guidance of their instructor. Up to now we have had only library-type facilities. We expect that the language instructors will gradually begin to schedule their classes in the new labs on a regular basis: for practice in speaking and listening comprehension at the elementary level, and for maintaining the oral-aural skills at intermediate levels. There will be four such rooms, equipped with a console from which the teacher controls the class activities and booths with recording machines where the students can record their own voices. Significantly, the new labs will be equipped for oral testing: groups of up to 65 students can record their voices simultaneously. These new facilities make OSU eligible to become a regional center for national language testing programs.

B. West Campus

Building three of the West Campus, now in an advanced planning stage, will offer library and study facilities for the undergraduates there. They will be able to dial the same programs, both audio and video, as the students in the main campus, and will have equal facilities for checking out individual study tapes. The West Campus installation will require considerable expansion of the Listening Center's switching processor, whose memory capacity will already have been filled by the expansion to the Foreign Language Building. We also hope by that time to have sufficient experience with computerized instruction so as to take advantage of the larger memory the new processor will afford, using it to create a two-way "conversational" relationship between student and computer. Then branched programming, testing, and record-keeping can be instituted.

C. Video Expansion

With the installation of eighteen video positions in Denney Hall, departments can now incorporate video homework into their teaching methods. The departments of Biological Sciences, Chemical Engineering, and Spanish are planning, after successful experiments during the past year, to increase the frequency of video homework assignments. Biological Sciences has expressed the desire to install video booths in the Botany and Zoology Building as soon as possible. Other departments are exploring video teaching possibilities opened up by our video service, and if past experience is a good indicator, we shall soon face a deluge of requests for service similar to that which our audio facilities encountered during its period of rapid growth. We shall very shortly have to

IV. Highlights

The Listening Center takes pride in its record of service to this institution and leadership among American universities. Here are some of the highlights of that record.

1) Our dial-access system, installed in 1965 after 1-1/2 years of research and development time, was the first such installation in America. Now, after three years of heavy use, its basic design - a blending of computer, telephone, and tape recorder technology - has proven valid in terms of fidelity and dependability. Interest in dial-access has risen sharply in the past several years, and our Listening Center is recognized as the most successful large scale application of the dial-access approach. We have received visitors from 230 institutions of higher learning and attention in the national press, including Newsweek and the Chicago Tribune. The National Association of Language Laboratory Directors has asked us to make our technical specifications available to other institutions, several of which (the largest being Penn State) are now planning installations similar to our own.

2) The Listening Center has won massive acceptance from our faculty and students. Since 1965, we have averaged between 35,000 and 40,000 calls per week during the three main academic quarters. Interestingly, this is a three to fourfold increase over previous attendance figures, which were already high; the increase is directly attributable to the greater convenience our decentralized student positions provide. The huge attendance is due to the wholehearted acceptance of the Listening Center by the faculty, who have incorporated its use into their teaching methods.

3) A greater variety of courses use the Listening Center at OSU than at any other institution of which we are aware. In all, 120 courses are taught with the help of Listening Center homework assignments. These include 13 foreign languages, and such other subjects as Agronomy, Biological Sciences, Chemical Engineering, Economics, Education, Linguistics, Morse Code, Military Science, Music, and Speech.

4) The technical design of the decentralized Listening Center, largely the work of the North Electric Company and the late Rezin White of the Listening Center staff, is entirely new and is now being widely imitated. Its engineering, whose main distinguishing features are fidelity and dependability, has proven sound in three years of heavy use. It delivers a distortion-free audio signal, optimized for speech or music (100-15,000 cps, \pm 2 db); this signal is received equally clearly whether the student is sitting a few yards from the program sources or 2 cable-miles away. Built to conform to telephone standards of dependability, the system is in operation from early morning until late at night, seven days a week, with a down time of less than 1%. The student receives service at electronic speed -- no wait; no busy signal -- regardless of how many other students are also requesting service.

increase the number of our video channels; we now have only two. Our plans also call for the eventual installation of other video viewing areas like the one in Denney Hall, to enable students living in dormitories to view their assigned programs within reasonable walking distance.

D. CAI Research

Now a look at the future. The Listening Center, like its kindred language laboratories throughout the country, is only semi-active. That is, instructors leave pauses in the tapes during which the student responds to the stimulus he has just heard; however, no-one hears his response but himself. Two desirable teaching factors are missing. The first is for the instructor to listen to the student's response and correct it; this possibility will soon be provided by the classroom-type labs in the Foreign Language Building. The second is the possibility of "branching" the student to the next appropriate stimulus, depending on what his last response has been. If he answers correctly, he goes on to the very next question; if he makes one sort of error, he is given the same stimulus again; if he makes another sort of error he is automatically switched to a remedial program that explains to him again the point he has missed. Such sophisticated programming as this will be possible only when the student stations are connected to a computerized system with hardware and software designed for this purpose. The Listening Center, by virtue of its computerized dial-access equipment, is in an excellent position to pioneer in applying CAI on a large scale.

Appendix A - Traffic Count of Calls Received 1967-68

<u>AREA</u>	<u>NUMBER OF POSITIONS</u>	<u>NUMBER CALLS/YEAR</u>	<u>CALLS /POSITION RATIO</u>
Hughes Hall	24	90,041	3751:1 290 per day
Ohio Union	48	218,106	4543:1 703 per day
*Stradley Hall	15	29,525	1968:1 95 per day
Morrison Towers	19	71,428	3759:1 230 per day
Main Library	24	167,335	6972:1 539 per day
*University Hall	12	26,014	2167:1 83 per day
Denney Hall	149	300,248	2015:1 968 per day
*Royer Commons	30	69,370	2312:1 223 per day
Morrill Tower	24	77,575	3232:1 250 per day
*Frats. and Sororities	27	41,300	1529:1 133 per day
*Lincoln Tower ** (Sept. '67)	24	38,375	1598:1 123 per day
*Stadium Dorm ** (Sept. '67)	4	<u>4,625</u>	1156:1 15 per day
		1,133,942	

* closed summer quarter

** expansion

Quarter Breakdown of Calls Received

<u>Quarter</u>	<u>Total Calls Received</u>	<u>Down Time</u>
Fall Quarter 1967	401,809	2 weeks
Winter Quarter 1968	357,066	3 weeks
Spring Quarter 1968	<u>284,400</u>	1 week
	1,043,363	

Average of 43,473 calls per week during three main academic quarters, 1967-68.

Appendix B:- Courses using the Listening Center 1967-68

AGRONOMY:	Soil Science (lectures)
CHINESE:	Elementary Chinese
	Intermediate Chinese
	Chinese Conversation
	Chinese Composition
CLASSICAL LANGUAGES:	Latin Review
	Intensive Introduction to Latin
	Latin language selections: Andronicus
	Plautus
	Cato the Elder
	Cicero
	Lucretius
	Catullus
	Virgil
	Horace etc . . .
	Odes and epodes of Horace
	Individual Studies in Latin
ECONOMICS:	Money and Banking
	Government Finance in the American Economy
EDUCATION:	Shorthand
	Advanced Stenography
	Introduction to the Study of Education
	Theory and Practice in Secondary Education
	The teaching of Modern Foreign Language
	Methods of Teaching Theatre
	The History of Western Education
	Audio-Visual Materials of Instruction
ENGLISH:	Introduction to Shakespeare
	Introduction to Drama
	Introduction to Chaucer
	Modern Drama
	Folklore
	Senior Seminar and Tutorial
	Introduction to Old English
	Language and Literature
	Old English Poetry
	Boewulf
FRENCH:	Elementary French
	Intermediate French
	Elementary French Conversation and Composition
	French Pronunciation
	Masterpieces of French Literature 17th & 18th centuries
	La Civilization Française des origines à nos jours
	French Classicism
	French literary Currents 1850 - 1914
	Contemporary French Drama
	La Civilization Française Contemporaine

GERMAN:	Elementary German Intermediate German Elementary German Conversation Basic German for Graduate Students Practical German Pronunciation
ITALIAN:	Elementary Italian Intermediate Italian
JAPANESE:	Elementary Japanese Intermediate Japanese
LINGUISTICS:	Introduction to Linguistics Phonological Structures Field Methods in Linguistics Languages of the World - Swahili Norwegian Hausa Lithuanian Turkish
MORSE CODE:	Introduction
MILITARY SCIENCE:	The United States in World Affairs (lectures)
MUSIC:	Introduction to Music Introduction to the History of Western Music Music History I - II - III Basic Experiences in Music Literature and Listening Instrumental Music in the Schools Music in the Classic Period Music in the Romantic Period Individual Composers: Their Lives and Works Chamber Music Literature Symphonic Literature Choral Literature
POLISH:	Elementary Polish Intermediate Polish
PORTUGUESE:	Elementary Portuguese Intermediate Portuguese
RUSSIAN:	Elementary Russian Intermediate Russian Intermediate Intensive Russian Introduction to Russian Literature Impressionism, Critical Realism Symbolism, Socialist Realism Study Tour of the USSR Practical Russian Pronunciation Pushkin and His Time Russian Poetry, Drama
SERBO CROATIAN:	Elementary Serbo-Croatian Intermediate Serbo-Croatian

SPANISH:

Elementary Spanish
Intermediate Spanish
Elementary Spanish Conversation and Composition
Review Grammar and Composition
Spanish Pronunciation
Spanish Literature

SPEECH:

American Speech for International Students
Voice and Diction
Principles of Phonetics
Introduction to Audiology
Stuttering: Theories and Therapies
Principles and Procedures for Appraisal and Treatment in
Speech Pathology
Principles of Effective Speaking
Introduction to Theatre
Argumentation and Debate
Advanced Studies in Speech and Hearing Science

ARABIC:

Elementary Arabic
Intermediate Arabic
Modern Literary Arabic
Modern Standard Arabic
Contemporary Arabic
Arabic Play, Poetry, Letters
Newspaper Arabic

HEBREW:

Elementary Hebrew
Intermediate Hebrew

VIDEO TAPES

SPANISH:

La Familia Fernández - Level I

54 lessons recorded on 4 one hour reels of tape

Emilio en España - Level II

14 lessons recorded on 2 one hour reels of tape

EDUCATION:

Teachers and Technology

Crisis and the University

BIOLOGY:

Principles of Atoms & Molecules

Enzymes

pH Supplement

RNA-DNA

Cell Division - Mitosis

Meiosis

Ecology of the Lakes

Probability

Population Genetics

Sex-Linked Characteristics

CHEMICAL

ENGINEERING:

Vorticity

Flow Visualization

Pressure Fields and Fluid Acceleration

Deformation of Continuous Media

Rheological Behavior of Fluids

CHINESE:

The Young Martyrs of Canton - Opera - 3 tapes

The Companion of Head Hunters - Opera - 3 tapes

Appendix C - Number of Students Enrolled in Courses
Using the Listening Center

DEPT.	FALL '67	WINTER '68	SPRING '68
*Agronomy		123 (240)	131 (240)
Chinese	136	150	49
Japanese	32	29	27
Linguistics	57 (601)	213	175
Latin	238	167	141
English	181 (220)	72 (035-065)	71 (035-065)
	44 (260)	181 (220)	207 (220)
	95 (262)	89 (260)	76 (260)
	40 (615)	45 (262)	24 (615)
	11 (810)	53 (520)	12 (670)
	17 (280)	28 (615)	43 (699)
	15 (822)	52 (649)	
		49 (699)	
German	2,014	1,789	1,368
*Arabic	11	10	7
French	1,769	1,567	1,296
*Hebrew	28	26	18
Italian	264	333	211
*Portuguese	36	23	11
Spanish	2,128	2,037	1,680
*Greek			18
Russian	479	540	412
Polish	23		
Serbo Croatian	16	22	6
Speech	98 (035-065)	74 (035-065)	65 (035-065)
	269 (105)	229 (105)	220 (105)
	156 (135)	151 (135)	157 (135)
	1,196 (165)	1,248 (165)	1,158 (165)
	14 (245)	26 (245)	20 (245)
	18 (265)	32 (265)	44 (265)
	22 (305)	16 (305)	29 (305)
	73 (540 & 840)	49 (656)	27 (540)
		20 (844)	50 (652)
		17 (940)	20 (844)
			36 (940)
*Economics		292 (530)	292 (530)
Education	455 (108)	149 (108)	13 (035) 1
	30 (211)	27 (211)	184 (108)
	263 (435)	211 (435)	26 (212)
	341 (632)	51 (540)	227 (435)
		46 (616)	40 (540)
		28 (631)	368 (632)
		295 (632)	81 (675)
		66 (675)	

Appendix C continued:

DEPT.	FALL '67	WINTER '68	SPRING '68
Music	1,101 (141)	1,029 (141)	741 (141)
	103 (142)	131 (142)	171 (142)
	88 (143)	130 (143)	142 (143)
	97 (241)	86 (242)	77 (243)
	225 (271)	274 (271)	169 (271)
	117 (600)	21 (563)	19 (645)
		11 (649)	6 (647)
		16 (644)	27 (660)
		11 (660)	
*Military Science	1,332	548	669
<u>VIDEO</u>			
*Chemical Engineering	16	319	272
*Biology	1,200	1,708	1,715
*Asterisk shows courses added during current year.			
TOTAL STUDENT ENROLLMENT	14,775	14,909	13,104
TOTAL CAMPUS ENROLLMENT	38,834	36,663	35,080
% of students using Listening Center	<u>38.04%</u>	<u>40.66%</u>	<u>37.35%</u>

Appendix D - Sources of Information

- 1) Mr. Furman Allen, Assistant Registrar, Room 203 Administration Building, Statistics files.
- 2) Listening Center files, Rooms 25 and 63, Denney Hall.
- 3) Peg count meter, Room 25, Denney Hall.